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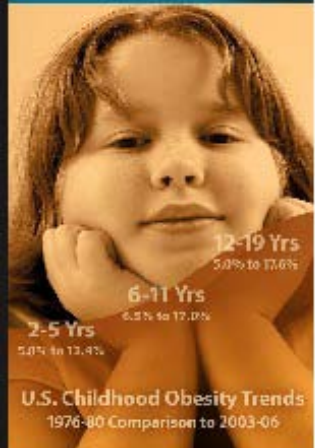
## **NTP Workshop: Role of Environmental Chemicals in the Development of Diabetes and Obesity**

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# **Research Strategies and Key Data Needs (Group A)**

**Franck Mauvais-Jarvis (chair)**  
**Elizabeth Maull (rapporteur)**

**Crabtree Marriott Hotel**  
**January 11-13, 2011**



## Research Strategy/Data Needs (Group A) Members

Habibul Ahsan, U Chicago	Josef Köhrle, Humboldt University (Berlin)
Scott Auerbach, NIH/NIEHS/NTP	Frank Mauvais-Jarvis, Northwestern ( <b>chair</b> )
Kim Boekelheide, Brown U	Elizabeth Maull, NIH/NIEHS ( <b>rapporteur</b> )
Joshua Edwards, Midwestern U	Raymond Novak, Shriners Hospital for Children International
Alison Holloway, McMaster U	Chirag Patel, Stanford
David Jacobs, U Minnesota	David Reif, US EPA
William Janzen, UNC – Chapel Hill	David Wallinga, Institute for Agriculture & Trade Policy



## Research Needs

- Help assess causality/biological plausibility by characterizing mechanistic pathways
  - Establish endpoint/readout
  - Use genetic elimination (knock out mice, knock down cells)
  - Pharmacologic inhibition, if appropriate



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## **Are there new research tools that need to be developed?**

- More informative and reliable in vitro assays that will characterize intermediate phenotypes
  - Beta cell function, adipocyte biology (HTS, MTS)
- Inexpensive method for measuring EDC or other chemicals of interest in blood or urine
- Rapid reliable techniques to measure epigenetic modification
- Non-invasive detection device for pre-diabetes